

CLAIMS

1. A method for cleaning and drying a front and a back surface of a substrate, the method comprising:

5 brush scrubbing the back surface of the substrate using a brush scrubbing fluid chemistry;

forming a front meniscus with the front surface of the substrate and a back meniscus with the back surface of the substrate, the forming of the front and the back meniscus being performed after the brush scrubbing of the back surface; and

10 scanning the front surface of the substrate and the back surface of the substrate with the front and the back meniscus, the front and back meniscus including a chemistry that is compatible with the brush scrubbing fluid chemistry.

2. A method as recited in claim 1, wherein the chemistry of the front and
15 back meniscus being compatible with the brush scrubbing fluid chemistry prevents chemical contamination of the front surface of the substrate.

3. A method as recited in claim 2, wherein chemical contamination causes one of particulate contaminants and undesirable etching of a front side film.

20 4. A method as recited in claim 1, wherein forming the front meniscus and the back meniscus is configured to occur substantially simultaneously.

5. A method as recited in claim 1, wherein scanning the front surface of the substrate and the back surface of the substrate is configured to occur substantially synchronously.

6. A method as recited in claim 2, wherein the front meniscus includes a front cleaning chemistry and the back meniscus includes a back cleaning chemistry.

7. A method as recited in claim 6, wherein the brush scrubbing fluid chemistry includes hydrofluoric acid.

8. A method as recited in claim 7, wherein the front cleaning chemistry includes hydrofluoric acid.

9. A method as recited in claim 1, wherein each of the front meniscus and the back meniscus includes one of isopropyl alcohol (IPA) vapor, nitrogen, organic compounds, hexanol, ethylglycol, and compounds miscible with water.

10. A method for cleaning and drying a front and a back surface of a substrate, the method comprising:

brush scrubbing the back surface of the substrate using a brush scrubbing fluid chemistry; and

upon completing the brush scrubbing of the back surface, applying a front meniscus onto the front surface of the substrate, the front meniscus including a front

cleaning chemistry, the front cleaning chemistry being chemically compatible with the brush scrubbing fluid chemistry.

11. A method as recited in claim 10, the method further comprising:
5 scanning the front surface of the substrate.

12. A method as recited in claim 10, the method further comprising:
applying a back meniscus onto the back surface of the substrate, the back
meniscus including a back cleaning chemistry, the back cleaning chemistry being
10 chemically compatible with the brush scrubbing fluid chemistry.

13. A method as recited in claim 12, the method further comprising:
scanning the back surface of the substrate.

14. A method as recited in claim 10, wherein the front chemistry and the back
15 chemistry of the front and back meniscus are configured to be compatible with the brush
scrubbing fluid chemistry so as to prevent chemical contamination of the front surface of
the substrate.

15. A method as recited in claim 14, wherein chemical contamination causes
20 particulate contaminants.

16. A method as recited in claim 13, wherein scanning the front surface of the substrate and the back surface of the substrate is configured to occur substantially synchronously.

5 17. A substrate preparation system, the system comprising:
a brush configured to brush scrub a back surface of a substrate using a brush scrubbing chemistry;
a front head defined in close proximity to a front surface of the substrate; and
a back head defined in close proximity to the back surface of the substrate, the
10 back head being positioned substantially opposite to the front head,
wherein the front head and the back head are applied as a pair to the substrate when the brush is apart from the substrate.

18. A system as recited in claim 17, wherein the front head is configured to
15 scan the front surface of the substrate and the back head is configured to scan the back surface of the substrate substantially synchronously.

19. A system as recited in claim 17, the front head including a first front conduit, a second front conduit, and a third front conduit, wherein the first front conduit,
20 the second front conduit, and the third front conduit are configured to act substantially simultaneously when in operation.

20. A system as recited in claim 17, the back head including a first back conduit, a second back conduit, and a third back conduit, wherein the first back conduit, the second back conduit, and the third back conduit are configured to act substantially simultaneously when in operation.

5

21. A system as recited in claim 17, further comprising:

a front arm secured to the front head for moving the front head into close proximity of the front surface of the substrate; and

a back arm secured to the back head for moving the back head into close
10 proximity of the back surface of the substrate substantially at the same time as the front head.

22. A system as recited in claim 19, wherein the first front conduit is configured to deliver a primary front fluid onto the front surface of the substrate, the
15 second front conduit is configured to deliver a secondary front fluid, and the third front conduit is configured to remove the front primary fluid and the secondary front fluid from over the front surface of the substrate.

23. A system as recited in claim 20, wherein the first back conduit is
20 configured to deliver a primary back fluid onto the back surface of the substrate, the second back conduit is configured to deliver a secondary back fluid, and the third back conduit is configured to remove the primary back fluid and the secondary back fluid from over the back surface of the substrate.